

Listing of Claims:

Claim 1 (Previously Presented): An apparatus comprising:

a plurality of libraries of software modules maintained at a plurality of test locations, respectively, of a network; and

a computer configured to i) display a graphical end user interface (GUI) via which an end user constructs a graphical model of a coordinated multi-location test of the network, the graphical model including flows respectively corresponding to the test locations, a respective flow for a corresponding test location being a flow of software modules from the library maintained at the corresponding test location, and ii) output the flows to at least one of the test locations.

Claim 2 (Original): An apparatus as in claim 1, wherein the GUI is run at a location remote from at least one test location, so that the end user constructs the graphical model and runs the test from the remote location.

Claim 3 (Previously Presented): An apparatus comprising:

a library of software modules; and

a computer configured to i) display a graphical end user interface (GUI) via which an end user constructs a graphical model of a coordinated multi-location test of a network, the graphical model including flows respectively corresponding to test locations of the network, a respective flow for a corresponding test location being a flow of software modules from the library, and ii) output the flows to at least one of the test locations.

Claim 4 (Original): The apparatus according to claim 3, wherein:

the GUI is run at a location remote from at least one test location, so that the end user constructs the graphical model and runs the test from the remote location.

Claim 5 (Original): The apparatus according to claim 3, wherein:

each flow sequentially runs the software modules contained therein.

Claim 6 (Original): The apparatus according to claim 3, wherein the software modules comprise:

- test modules that perform predefined test operations; and
- coordination modules to coordinate inter-operation of test modules in different flows.

Claim 7 (Original): The apparatus according to claim 6, wherein coordination modules are employed in a pair, comprising:

- a first member of the pair employed in a first flow to send a coordination message to a second flow; and
- a second member of the pair employed in the second flow to receive the coordination message from the first member.

Claim 8 (Original): The apparatus according to claim 7, wherein:

- the coordination message also contains test generated data.

Claim 9 (Original): The apparatus according to claim 8, wherein:

- the test generated data is formatted in a predefined format.

Claim 10 (Original): The apparatus according to claim 8, wherein:

- each test location has an associated information holding environment, in which the test generated data is stored.

Claim 11 (Original): The apparatus according to claim 3, further comprising:

- a conversion unit to generate the flows from the graphical model.

Claim 12 (Original): The apparatus according to claim 11, wherein the conversion unit comprises:

- a converter to convert the graphical model into text; and
- a parser to generate the flows from the text.

Claim 13 (Previously Presented): The apparatus according to claim 12, wherein:
the parser interacts with the library to generate the flows.

Claim 14 (Original): The apparatus according to claim 12, wherein:
a language used by the converter to convert the graphical model into text is XML.

Claim 15 (Original): The apparatus according to claim 3, wherein:
the library is centrally located.

Claim 16 (Original): The apparatus according to claim 3, wherein:
a copy of the library is distributed to each test location.

Claim 17 (Previously Presented): An apparatus comprising:
a library of software modules, including test modules and coordination modules;
and
a computer configured to i) display a graphical end user interface (GUI) via which
an end user constructs a graphical model of a coordinated multi-location test of a
network, the graphical model including flows respectively corresponding to test locations
of the network, a respective flow for a corresponding test location being a flow of at
least one software module, wherein test modules perform predefined test operations
and coordination modules coordinate inter-operation of test modules in different flows,
and ii) output the flows to at least one of the test locations.

Claim 18 (Canceled)

Claim 19 (Previously Presented): An apparatus comprising:
a library of software modules, including test modules, and coordination modules;
a computer configured to i) display a graphical end user interface to design a
graphical model of software to test multiple test locations of a network, in which a flow of
at least one software module is constructed for each test location, and coordination

modules coordinate inter-operation of test modules in different flows and communicate test generated data with the different flows, and ii) output the flows to at least one of the test locations;

- a conversion unit to generate the flows from the graphical model;

- at least one agent to run the flows;

- at least one probe deployed at each test location to collect data from at least one attribute of the network and communicate the data with the at least one agent; and

- a central computer configured to control running of the flows and collect the data from the at least one agent.

Claim 20 (Previously Presented): A computer readable medium, comprising:

- a first set of instructions housing a library of software modules, including test modules and coordination modules;

- a second set of instructions creating a graphical user interface (GUI) via which an end user constructs a graphical model for a coordinated multi-location test of a network, the graphical model including flows respectively corresponding to test locations of a network, a respective flow for a corresponding test location being a flow of at least one software module;

- a third set of instructions to convert the graphical model to a text representation of the multi-location test;

- a fourth set of instructions controlling an agent to receive and analyze the text representation, access the library, and run the flows for each test location; and

- a fifth set of instructions coordinating synchronization and exchange of test generated data between flows.

Claim 21 (Previously Presented): The apparatus of claim 1, further comprising:

- a plurality of agents at the plurality of test locations, wherein the software modules are operable to access a data store of the agents.

Claim 22 (Previously Presented): The apparatus of claim 1, wherein the software modules performing the test of the network report a 'test failed' at the outset, and change the result to success only if all the tests applied by the module succeed.

Claim 23 (Previously Presented): The apparatus of claim 1, wherein the graphical model is viewed as a multi-branch hierarchical tree and dotted arrows show co-ordination points between the flows.

Claim 24 (Previously Presented): The apparatus of claim 1, wherein the software modules comprise a send email and a receive email module.

Claim 25 (Previously Presented): The apparatus of claim 24, wherein the receive email module uses unique identifying information about an email to select the email from a plurality of received emails.